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CRAWFORD MAUNU PLLC
1150 NORTHLAND DRIVE, SUITE 100
ST. PAUL, MN 55120

EXAMINER	
VAN HANDEL, MICHAEL P	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/740,263	BARRACLOUGH ET AL.	
	Examiner	Art Unit	
	MICHAEL VAN HANDEL	2424	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 November 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-75* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-75* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/26/2008 has been entered.

Response to Amendment

1. This action is responsive to an Amendment filed 11/26/2008. Claims **1-75** are pending. Claims **1**, **2**, **22**, **28**, **31**, **46**, **55**, **62**, **65**, **69**, and **70** are amended.

Response to Arguments

1. Applicant's arguments, filed 11/26/2008, have been fully considered, but they are not persuasive.

Applicant argues that the cited references do not configure external services data for specific appliances, do not store the data, and are not responsive to do so based upon user inputs received over a closed-loop system. The applicant specifically argues that none of the cited references disclose limitations directed to configuring externally-received media data as claimed (i.e., into a data format usable by a particular device).

The examiner respectfully disagrees. The applicant refers by way of example to configuring data from a packet-based format to a different format that is not packet-based.

Hamlin discloses a home 12 that receives mass media signals 22 from outside the home by way of a variety of mediums, including television 24 26 30 and telephone 37 lines, amongst others (col. 2, l. 58-67; col. 3, l. 1-2; & Fig. 1). The distinct input media signals 22 are received by a converter 34, where the media signals 22 of various signal types are converted and transmitted along a communication bus 36 throughout the house 12. The communication bus 36 can be any communication bus network (col. 3, l. 3-12). A system controller 38 and multiple interface pods 44 are coupled to the communication bus (col. 3, l. 13-16). Hamlin discloses that the communication bus could be coaxial cable (col. 3, l. 10-12). Hamlin further discloses that the communication bus interface of the system controller converts control commands and data between analog (coax bus) and digital form (col. 4, l. 11-15). As such, the examiner maintains that Hamlin teaches converting between packet-based and not packet-based formats.

Applicant further argues that none of the references disclose limitations directed to a closed-loop system including a media storage arrangement that stores media so that the data may be used at a specific device, or to communicating stored/configured data to a specific device over a closed-loop bussing arrangement in response to remote control inputs from a user. The examiner respectfully disagrees. Hamlin is directed towards converting mass media signals having different formats using a single, pre-

existing network (col. 1, l. 5-8 & col. 2, l. 58-67). The user uses a remote controller 42 to direct any mass media signal to be converted and distributed to any room in the house (col. 5, l. 46-50). Hamlin further discloses distributing the signals using a closed-loop bussing arrangement 36 (in-home)(Fig. 1). Hamlin does not specifically disclose storing the mass media signals; however, Ellis et al. discloses an in-home server 80 that can store and serve video to users throughout the home via a bussing arrangement [paragraphs 0062 and 0074]. The examiner maintains that it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the "converter/system controller" of Hamlin like the server taught by Ellis, in order to use a typical client-server architecture in the home for storing and serving video and other data to devices in the home, just as the typical server does on a much larger scale.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-45 are rejected under 35 U.S.C. 101 because it is unclear what statutory class an "arrangement" falls into.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims **1-6**, **8-16**, **21**, **23-28**, **30**, **32-36**, **42-49**, **51**, **53-59**, **63-66**, **68**, **70**, and **74** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamlin in view of Ellis et al.

Regarding claim **1**, the claimed closed-loop media storage and playback arrangement for processing media-based external-services data for a user facility that provides media and telephony-related services to its users is met as follows:

- The claimed closed-loop audio, video, and data signal bussing arrangement adapted to distribute audio, video, and data to designated points in the user facility is met by the communication bus 36, which serves to receive information from external services and communicate the information to the network [col. 3, lines 3-12].
- The claimed plurality of telephony-based appliances communicatively coupled to the bussing arrangement, wherein the plurality of appliances provide bi-directional telephony services using at least one of: audio, video, and data signals is met by the plurality of interface pods 44, which can interface a plurality of appliances [col. 3, lines 13-18; Col 1, Lined 10-25; Col 1, Lines 33-40; Col 2, line 58-Col 3, Line 2; Col 7, Lines 9-20].
- The claimed “media storage and playback device including at least one data memory circuit adapted to store external services data and adapted to store configuration data” is only partially met by the Hamlin reference.

Hamlin teaches system database storage 48 within the system controller that holds information on the status of the distribution system 10. The database 48 stores information that is useful in configuring and controlling the system [col. 4, lines 16-27]. The Hamlin reference does not teach that external services data can be stored in a data memory circuit. The Ellis reference cures this deficiency in teaching a server 80, as the primary device in the home [Fig. 5 and paragraph 0074]. The server, as taught with reference to a separate embodiment, handles data distribution tasks and stores local information. The server may be used to implement a client-server based interactive television program guide system. Also, the server 42 may be capable of handling text, graphics, and video [paragraph 0062]. It would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the "converter/system controller" of Hamlin like the server taught by Ellis, in order to use a typical client-server architecture in the home for storing and serving video and other data to devices in the home, just as the typical server does on a much larger scale.

- The claimed programmable network interface unit (NIU) adapted to store media-based external services data in the memory circuit and to communicatively couple the stored external services data from the memory circuit to the plurality of appliances in the user facility via the bussing arrangement as a function of the configuration data in the memory

circuit is met by converter 34, which serves to receive the external services data and send it to the bussing arrangement [col. 3, lines 3-13]. As noted above, the Hamlin reference does not discuss that the external services data can be stored on the converter. The Ellis reference, however, does teach that the in-home server 80 can store and serve video to users throughout the home via a bussing arrangement [paragraphs 0062 and 0074]. The configuration data stored in the system database storage 48, as discussed above, is used and taught by the Hamlin reference to monitor and control activity throughout the home [col. 4, lines 16-27]. It would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the "converter/system controller" of Hamlin like the server taught by Ellis, in order to use a typical client-server architecture in the home for storing and serving video and other data to devices in the home, just as the typical server does on a much larger scale.

- The claimed remote-control user input device adapted to communicate with the NIU, in response to user inputs received at the remote user input device, to access the data stored in the memory circuit, program the programmable NIU by providing the configuration data to the NIU and command the NIU by communicating command signals via the closed-loop bussing arrangement to configure the external-services data for use at a particular one of the plurality of appliances in the user facility, based

upon capabilities of the particular one of the appliances, and to control the NIU to communicate the configured external-services data to the particular one of the plurality of appliances is met by the remote controller 42, which allows for input of programming and use information [col. 5, lines 34-45]. Furthermore, in the client-server architecture as taught by the Ellis reference, a data input device 140 or remote control 54 [Fig. 10] can be used to request information stored at the server for display at the user device [paragraphs 0085-0065].

Regarding claim **2**, the claimed user input device including one of the plurality of appliances, and wherein the NIU configures the external-services data by changing the data into a format required by the particular one of the plurality of appliances for processing such data is met by the remote controller's 42 ability to control directly or indirectly the system controller 38 [col. 5, lines 34-45].

Regarding claim **3**, the claimed plurality of appliances including at least one of a TV, a phone, a computer, a printer, a videophone, a videocassette recorder, an analog recorder, a digital recorder, a stereo, a camera, a wireless phone, an intercom, an audio speaker, and a pager is met by the Receiving Units (TVs, VCRs, Computers, phones, etc.).

Regarding claim **4**, the claimed user input device including at least one of: a TV, a phone, a computer, a videophone, a videocassette recorder, a wireless phone, an audio speaker, a pager, a remote control, a modem, a voice recognition system, an

Internet access device, a keypad, and a touch screen is met by the remote controller 42.

Regarding claim **5**, the claimed bussing arrangement including at least one of: a coaxial cable, a telephony line, a Ti line, an ISDN line, a DSL line, an infrared transmitter, a wireless transmitter, a telephone modem, a wireless modem, a cable modem, a broadband modem, and a computer network is met by the CABLE 30, AOSL 32, TELEPHONE 37, and other forms of mass media signals as discussed in column 2, lines 59-67.

Regarding claim **6**, the claimed user input device including a television remote adapted to select NIU commands from a display generated by the NIU and displayed on the television is met by the system controller 38 and the remote controller 42 of the system controller, which has a human input device 55 and a display device 45 for configuring the reception and configuration of the system [col. 3, lines 59-65 & col. 5, lines 34-45].

Regarding claim **8**, the claimed NIU being further adapted to configure the external services data for use at a particular one of the plurality of appliances is met by the converter 34, which converts the mass media signals into a signal that is transmitted along a communication bus 36 for delivery to an interface pod 44 and converted for playback on the appropriate device [col. 3, lines 3-23].

Regarding claim **9**, the claimed external services data including audio and video data, wherein the NIU is adapted to configure the audio data for use at an audio appliance and to configure the video data for use at a video appliance is met by the

mass media signals, such as video, audio, and various other types of electronic mass media information [col. 1, lines 47-52] being delivered to the home, converted, sent to the communication bus and utilized according to the format type on a audio appliance or video appliance.

Regarding claim **10**, the claimed arrangement for processing external-services data for use in a user facility, according to claim 1, wherein the NIU includes the data memory circuit is not met fully by the Hamlin reference. While Hamlin does teach that the system controller contains system database storage 48 for storing configuration information, he does not teach that the external-services data can be stored at the converter/controller. The Ellis reference cures this deficiency in teaching a server 80, as the primary device in the home [Fig. 5 and paragraph 0074]. The server, as taught with reference to a separate embodiment, handles data distribution tasks and stores local information. The server may be used to implement a client-server based interactive television program guide system. Also, the server 42 may be capable of handling text, graphics, and video [paragraph 0062]. It would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the "converter/system controller" of Hamlin like the server taught by Ellis, in order to use a typical client-server architecture in the home for storing and serving video and other data to devices in the home, just as the typical server does on a much larger scale.

Regarding claim **11**, the claimed NIU being adapted to store incoming external services data at the data memory circuit until a routing command is received from the user input device, and to route the external services data directly from the data memory

circuit in response to the received routing command is met by remote controller 42, which allows for input of programming and use information [col. 5, lines 34-45]. Furthermore, in the client-server architecture as taught by the Ellis reference, a data input device 140 or remote control 54 [Fig. 10] can be used to request information stored at the server for display at the user device [paragraphs 0085-0086]. The server may be used to implement a client-server based interactive television program guide system. Also, the server 42 may be capable of handling text, graphics, and video [paragraph 0062]. It would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the "converter/system controller" of Hamlin like the server taught by Ellis, in order to use a typical client-server architecture in the home for storing and serving video and other data to devices in the home, just as the typical server does on a much larger scale, in which users can utilize the input devices to request stored information, much like is done in a video on demand system which is commonplace in the art.

Regarding claim **12**, the claimed user input device being adapted to communicate with the NIU and determine the type of external-services data that is stored is met by the remote controller 42, which allows for input of programming and use information [col. 5, lines 34-45]. Furthermore, in the client-server architecture as taught by the Ellis reference, a data input device 140 or remote control 54 [Fig. 10] can be used to request information stored at the server for display at the user device [paragraphs 0085-0086]. The server may be used to implement a client-server based interactive television program guide system. Also, the server 42 may be capable of

handling text, graphics, and video [paragraph 0062]. It would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the "converter/system controller" of Hamlin like the server taught by Ellis, in order to use a typical client-server architecture in the home for storing and serving video and other data to devices in the home, just as the typical server does on a much larger scale, in which users can utilize the input devices to request stored information, much like is done in a video on demand system which is commonplace in the art.

Regarding claim **13**, the claimed user input device being adapted to determine the source of the external-services data is met by the system database storage 48, within the system controller 38, which serves to store information on the incoming signal and it's frequency and source [col. 4, lines 16-29].

Regarding claim **14**, the claimed NIU being adapted to store configuration information in the data memory circuit, wherein the configuration information includes routing information for external services data, again, is met by the RAM, ROM, and system database storage, which serve to store information about incoming signals and therefore, properly route the signals along the communication bus to the appropriate devices [col. 3, line 59 – col. 4, line 33].

Regarding claim **15**, the claimed external-services data including data having a first data form, wherein the NIU is adapted to convert the external services data into a second data form for use by a particular one of the plurality of appliances is met by converter 34, which serves to convert from the input media signal into a media signal that the interface pods 44 can utilize and output to the device [col. 3, lines 3-23].

Regarding claim **16**, the claimed first data form including packet-based data, and the second data form including non-packet-based data is met by the converter 34 being able to convert from mass media signals or internet signals to a signal that is communicated on the communication bus 36.

Regarding claim **21**, the claimed plurality of appliances including a TV, wherein the NIU is adapted to display the configuration of the plurality of appliances on the TV screen is met by the system controller 38, which is one of the plurality of appliances and contains a display device 45 for display of the configuration and user operation therewith [col. 3, lines 59-65].

Regarding claim **23**, the claimed user input device being adapted to command the NIU based upon the configuration display on the TV screen is met by the control of the system by the human input device 55 via the display device 45 of system controller 38.

Regarding claim **24**, the claimed one of the plurality of appliances including a display, wherein the NIU is adapted to display the stored incoming external services data on the display is met by the inclusion of the television in the network, which can be directed by the system controller 38 to display information from the system database storage 48, such as data from the external services [col. 4, lines 16-33].

Regarding claim **25**, the claimed user input device being adapted to command the NIU based upon the displayed incoming external services data is, again, met by the inclusion of the television in the network, which can be directed by the system controller

38 to display information from the system database storage 48, such as data from the external services [col. 4, lines 16-33].

Regarding claim **26**, the claimed NIU being adapted to display email, audio messages, and video messages, and wherein the user input device is adapted to respond to an input corresponding to the displayed information and to command the NIU to route the displayed information to a particular one of the plurality of appliances is met by the ability of the system to follow user input to provide programming information to the appropriate appliance through user prompts and selections [col. 5, lines 34-48].

Regarding claim **27**, the claimed digital memory circuit coupled to the NIU, wherein the external services data is digital data and is stored in the digital memory circuit is, again, met by converter 34, which serves to receive the external services data and send it to the bussing arrangement [col. 3, lines 3-13]. As noted above, the Hamlin reference does not discuss that the external services data can be stored on the converter. The Ellis reference, however, does teach that the in-home server 80 can store and serve video to users throughout the home via a bussing arrangement [paragraphs 0062 and 0074]. The configuration data stored in the system database storage 48, as discussed above, is used and taught by the Hamlin reference to monitor and control activity throughout the home [col. 4, lines 16-27]. It would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the "converter/system controller" of Hamlin like the server taught by Ellis, in order to use a typical client-server architecture in the home for storing and serving video and other data to devices in the home, just as the typical server does on a much larger scale.

Regarding claim **28**, the claimed external services data being stored at a location external from the NIU, within the user facility is met by the ability to store the data at a user device VCR as taught by the user routing the signal from the converter to the other VCR for recording [col. 5, lines 46-60].

Regarding claim **30**, the claimed user input device being coupled to the bussing arrangement and using the bussing arrangement to command the NIU is met by the system controller 38, which is one of the devices on the bussing arrangement and is used to control converter 34.

Regarding claim **32**, the claimed user input device being adapted to send control signals to the NIU that are configured to enable the control of external-data services including at least one of: caller ID information, address book information, pay-per-view access information, downloadable multimedia information, dynamically allocable telephone numbers, call forwarding, message on hold, directory assistance, and household systems control information is met by the discussion of the downloading of stock information, which is downloadable multimedia information through the NIU [col. 6, line 66 – col. 7, line 8].

Regarding claim **33**, the claimed NIU including a printed circuit board (PCB) having at least one general processor and at least one specific processor adapted to process video data is met by the discussion of the converter and the extension boards that can be purchased to process more data [col. 7, lines 21-24].

Regarding claim **34**, the claimed PCB including a RISC processor is, again, met by the discussion in column 7, lines 21-24. The inclusion of a RISC processor, while

commonly known in the art, is not a patentable distinction over claim 33, and is therefore rejected on the same grounds.

Regarding claim **35**, the claimed PCB including a DSP processor is, again, met by the discussion in column 7, lines 21-24. The inclusion of a DSP processor, while commonly known in the art, is not a patentable distinction over claim 33, and is therefore rejected on the same grounds.

Regarding claim **36**, the claimed each of the plurality of appliances being adapted to deliver status information signals to the NIU including the status of the appliance sending the signal, further comprising a user interface device adapted to access and provide the status information to a user is met by the system database storage 48, which has the ability to monitor the status of the interface pods and devices on the network by monitoring the activity at each location [col. 4, lines 16-27].

Regarding claim **42**, the claimed appliance interface device coupled to an appliance and to the bussing arrangement and adapted to receive a first type of signal and convert the data signal to a second type of data signal is met by the interface pods 44, which serve to couple the appliance to the bussing arrangement and convert the signal carried on the communication bus to a signal that is intelligible by the appliance [col. 4, lines 28-51].

Regarding claim **43**, the claimed appliance interface device being further adapted to receive a signal via a first type of communications line and to transmit the signal via a second type of communications line is met by the converter within the interface pods 44,

which can receive information from the communication bus and transmit it via a wireless link or analog link [col. 4, lines 28-51].

Regarding claim **44**, the claimed appliance interface device being programmable via a user input is met by the system controller 38, and it's ability to program and control the NIUs and the interface pods.

Regarding claim **45**, the claimed appliance interface device being programmable by an external-services provider via the NIU is met by the system database storage 48, which can store information sent in through the NIUs and use the information to program and utilize the interface pods.

Regarding claim **46**, the claimed network interface system for interfacing different types of communication systems including a first user-based telephone communication system within a user facility and a packet-based communication system is met as follows:

- The claimed data memory circuit adapted to store configuration data and packet-based data from the packet-based communication system is only partially met by the Hamlin reference. Hamlin teaches system database storage 48 within the system controller that holds information on the status of the distribution system 10. The database 48 stores information that is useful in configuring and controlling the system [col. 4, lines 16-27]. The Hamlin reference does not teach that external services data can be stored in a data memory circuit. The Ellis reference cures this deficiency in teaching a server 80, as the primary device in the home [Fig. 5 and

paragraph 0074]. The server, as taught with reference to a separate embodiment, handles data distribution tasks and stores local information. The server may be used to implement a client-server based interactive television program guide system. Also, the server 42 may be capable of handling text, graphics, and video [paragraph 0062]. It would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the "converter/system controller" of Hamlin like the server taught by Ellis, in order to use a typical client-server architecture in the home for storing and serving video and other data to devices in the home, just as the typical server does on a much larger scale.

- The claimed telephony-based user communication device is met by the system controller 38 and remote controller 42, used to communicate with the system.
- The claimed processor arrangement adapted to write configuration data into and read configuration data from the memory circuit and to provide data for presenting configuration information for accessing at the telephony-based user communication device, further adapted to process data received from, and exchange processed data between, the first user-based communication system and the packet-based communication system, and, in response to the configuration data, also adapted to route both selected information provided by the packet-based communication system and data stored at the data memory circuit to selected channels of

the first user-based telephone communication system by configuring at least some of the data routed into a processor-readable format that is amenable to access by a telephony-based appliance connected to the user-based telephone communication system is met by the system controller 38 in conjunction with the converter 34 and the interface pods 44, which all serve to exchange processed data between the communication bus 36 and the external mass media providers. In the case of the Ellis reference, the input device 140 or the remote control 54 can be used to request information from the stored information at the server [paragraphs 0085-0086]. The server may be used to implement a client-server based interactive television program guide system. Also, the server 42 may be capable of handling text, graphics, and video [paragraph 0062]. It would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the "converter/system controller" of Hamlin like the server taught by Ellis, in order to use a typical client-server architecture in the home for storing and serving video and other data to devices in the home, just as the typical server does on a much larger scale, in which users can utilize the input devices to request stored information, much like is done in a video on demand system which is commonplace in the art.

- The claimed user input means for inputting configuration-defining control signals, wherein the processor arrangement responds to the configuration-

defining control signals by changing the configuration data in the memory circuit and by rerouting selected information provided by the packet-based communication system to selected channels of the first user-based communication system according to the configuration-defining control signals is met by the human input device 55 and/or remote controller 42 for controlling the system controller 38, in an attempt to configure and re-route data according to the appliance and interface pod that the data will be viewable on.

Regarding claim **47**, the claimed network system coupled to the first user-based communications system is met by communication bus 36, which couples the network together.

Regarding claim **48**, the claimed user input means including at least one of: an IR key panel, a wall-mount unit for the system, a TV, a telephone, a computer, a videophone, a videocassette recorder, a wireless phone, a remote control, a modem, a voice recognition system, an Internet access device, a keypad, and a touch screen is met by the human input device 55 and/or remote controller 42.

Regarding claim **49**, the claimed processor arrangement being further adapted to write configuration data into the memory circuit in response to signals received from the packet-based communication system is met by the ability for the user to control the system controller 38 and reconfigure the system based on the system database storage 48, in an attempt to configure and route information on the packet-based communication system as necessary [col. 3, line 59 – col. 4, line 33].

Regarding claim **51**, the claimed user communication device including at least one of: a TV monitor, a printer, and computer is met by the system controller 38, having a display device 45, and CPU 43 [col. 3, lines 59-65].

Regarding claim **53**, the claimed user input means including a computer adapted to communicate on the Internet is met by the discussion of the connection via an ADSL line, which can provide Internet Connections [col. 2, lines 59-67].

Regarding claim **54**, the claimed packet-based communication system including at least one of: a cable modem, a wireless modem, a broadband modem, a telephone modem, a DSL, a T1 line, and a computer network is met by the modem coupled to the system controller as discussed in column 4, lines 9-15.

Regarding claim **55**, the claimed network interface system for interfacing different types of communication systems including a first user-based communication system and a packet-based communication system is met as follows:

- The claimed data memory circuit adapted to store data including packet-based data received via the packet-based communication system is only partially met by the Hamlin reference. Hamlin teaches system database storage 48 within the system controller that holds information on the status of the distribution system 10. The database 48 stores information that is useful in configuring and controlling the system [col. 4, lines 16-27]. The Hamlin reference does not teach that external services data can be stored in a data memory circuit. The Ellis reference cures this deficiency in teaching a server 80, as the primary device in the home [Fig. 5 and

paragraph 0074]. The server, as taught with reference to a separate embodiment, handles data distribution tasks and stores local information. The server may be used to implement a client-server based interactive television program guide system. Also, the server 42 may be capable of handling text, graphics, and video [paragraph 0062]. It would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the "converter/system controller" of Hamlin like the server taught by Ellis, in order to use a typical client-server architecture in the home for storing and serving video and other data to devices in the home, just as the typical server does on a much larger scale.

- The claimed user communication device is met by the system controller 38 and remote controller 42, used to communicate with the system.
- The claimed processor arrangement adapted to write data-intercept select data into and read data-intercept select data from the memory circuit and to provide data for communicating with a user via the communication device, further adapted to process data received from, and exchange processed data between, the first user-based telephone communication system and the packet-based communication system by configuring data between executable formats respectively proprietary to the telephone communication system and the packet-based communication system, and, in response to the data in the data memory circuit, also adapted to intercept information from the packet-based communication system and to

store the intercepted information in the data memory circuit is met by the system controller 38 in conjunction with the converter 34 and the interface pods 44, which all serve to exchange processed data between the communication bus 36 and the external mass media providers. In the case of the Ellis reference, the input device 140 or the remote control 54 can be used to request information from the stored information at the server [paragraphs 0085-0086]. The server may be used to implement a client-server based interactive television program guide system. Also, the server 42 may be capable of handling text, graphics, and video [paragraph 0062]. It would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the "converter/system controller" of Hamlin like the server taught by Ellis, in order to use a typical client-server architecture in the home for storing and serving video and other data to devices in the home, just as the typical server does on a much larger scale, in which users can utilize the input devices to request stored information, much like is done in a video on demand system which is commonplace in the art.

- The claimed user means for inputting message-retrieval control signals, wherein the processor arrangement responds to the message-retrieval control signals by displaying messages from the data memory circuit is met by the human input device 55 and/or remote controller 42 for controlling the system controller 38, in an attempt to configure and re-

route data according to the appliance and interface pod that the data will be viewable on.

Regarding claim **56**, the claimed user input means being at least one of: an IR key panel, a wall-mount unit for the system, a TV, a telephone, a computer, a videophone, a videocassette recorder, a wireless phone, a remote control, a modem, a voice recognition system, an Internet access device, a keypad, and a touch screen is met by the human input device 55 and/or remote controller 42.

Regarding claim **57**, the claimed processor arrangement being further adapted to write data-intercept select data into the memory circuit in response to signals received from the packet-based communication system is met by the ability for the user to control the system controller 38 and reconfigure the system based on the system database storage 48, in an attempt to configure and route information on the packet-based communication system as necessary [col. 3, line 59 – col. 4, line 33].

Regarding claim **58**, the claimed processor arrangement being further adapted to write data-intercept select data into the memory circuit in response to signals received from the input means is met by the system controller 38 in conjunction with the system database storage 48 and human input device 55, which serve to reconfigure data in the memory, allowing for routing of information and data as desired by the user.

Regarding claim **59**, the claimed user communication device including a TV monitor is met by the system controller 38, having a display device 45, and CPU 43 [col. 3, lines 59-65].

Regarding claim **63**, the claimed user communication device including a computer adapted to communicate on the Internet is met by the discussion of the connection via an ADSL line, which can provide Internet Connections [col. 2, lines 59-67].

Regarding claim **64**, the claimed packet-based communication system including at least one of: a cable modem, a wireless modem, a broadband modem, a telephone modem, a DSL, a T1 line, and a computer network is met by he modem coupled to the system controller as discussed in column 4, lines 9-15.

Regarding claim **65**, the claimed method for controlling communications data in a communications system at a user facility, the system having a NIU (Network Interface Unit), a user interface device, a plurality of telephony-based communications appliances, and a closed-loop bussing system is met as follows:

- The claimed step of using the user interface device and programming the NIU with configuration information for configuring received external-services data is met by the discussion of the system database storage 48, which serves to store configuration information for the mass media providers, the configuration information programmed by the user via the system controller 38 [col. 3, line 59 – col. 4, line 27].
- The claimed step of receiving external-services data at the NIU is met by the converter's 34 ability to receive information from mass media providers.

- The claimed step of "storing the received external services data in a memory circuit" is partially met by is met by converter 34, which serves to receive the external services data and send it to the bussing arrangement [col. 3, lines 3-13]. As noted above, the Hamlin reference does not discuss that the external services data can be stored on the converter. The Ellis reference, however, does teach that the in-home server 80 can store and serve video to users throughout the home via a bussing arrangement [paragraphs 0062 and 0074]. The configuration data stored in the system database storage 48, as discussed above, is used and taught by the Hamlin reference to monitor and control activity throughout the home [col. 4, lines 16-27]. It would have been clearly obvious to one of ordinary skill in the art at the time of the invention to implement the "converter/system controller" of Hamlin like the server taught by Ellis, in order to use a typical client-server architecture in the home for storing and serving video and other data to devices in the home, just as the typical server does on a much larger scale.
- The claimed step of configuring the stored external-services data from a first processor-readable data format into a different processor-readable format and transferring the configured data via the bussing arrangement to one of the telephony-based communications appliances is met by the communication bus 36, which serves to send the information (according to

the system database storage 48) to each interface pad 44, after having received the media from the converter 34 [col. 3, lines 3-23].

- The claimed step of receiving the transferred external-services data at the one communications appliance is met by the reception of the data via the communication bus 36 at the interface pod 44 and eventually the receiving unit 46.

Regarding claim **66**, the claimed step of programming the data receiving unit with configuration information including programming routing information for routing the external-services data to particular ones of a plurality of communications devices is met by column 4, lines 9-33, wherein the ability to configure and route data appropriately throughout the system is disclosed.

Regarding claim **68**, the claimed plurality of communications devices including an Internet device, wherein the routing data includes the assignment of a particular Internet protocol address to the Internet device is met by the modem discussed in column 4, lines 9-15 and the ability for the routing data to contain interface pod address locations [col. 4, lines 9-27].

Regarding claim **70**, the claimed step of using the user interface device and programming the NIU with configuration information for external-services data including programming from an external-services provider location, wherein the configuration information includes data for controlling the type of external services that the NIU passes to the plurality of communications devices, and wherein configuring the stored external-services data from a first processor-readable data format into a different

processor-readable format and transferring the configured data via the bussing arrangement to one of the telephony-based communications appliances includes configuring and transferring less than all of a set of external-services data to one of the telephony-based communications appliances based upon the controlled type of external services is met by the system controllers ability to configure the system database storage 48 with information received via a mass media signal [col. 4, lines 16-27].

Regarding claim **74**, the claimed external-services provider location programming the NIU with a packet-based access package is met by the discussion of the modem being used to program the system controller through a digital line protocol engine [col. 4, lines 9-15].

3. Claims **20** and **50** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamlin in view of Ellis et al. and further in view of Goldstein.

Regarding claim **20**, Hamlin and Ellis teach all of that which is discussed above with regards to claim 1. Neither Hamlin nor Ellis teach the inclusion of a security code in the input device, wherein the NIU is further adapted to respond only to commands having the security code. Goldstein discloses a system in which the converter responds to only commands sent from a remote control with a specific identification number, for security purposes [col. 4, lines 57-65]. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a security code in the remote controller, in order to allow for tighter security and use by only those authorized users.

Regarding claim **50**, Hamlin and Ellis teach all of that which is discussed above with regards to claim 46. Neither Hamlin nor Ellis teaches the reconfiguration of the processor arrangement in response to a user-provided security code. Goldstein discloses a system in which the converter responds to only commands sent from a remote control with a specific identification number, for security purposes [col. 4, lines 57-65]. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a security code in the remote controller, in order to allow for tighter security and use by only those authorized users.

4. Claims **7**, **22**, **29**, **31**, **37-41**, **67**, and **75** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamlin in view of Ellis et al. and further in view of Edens et al.

Regarding claim **7**, Hamlin and Ellis teach all of that which is discussed above with regards to claim 1. Neither Hamlin nor Ellis teaches that the user input device includes a telephone adapted to select NIU commands from a command menu programming into the NIU. Edens et al teach a system that detects a "ring" on an analog PSTN line and uses the "ring" to control the processing functionality of the system using DTMF dialing [col. 96, lines 36-46]. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the ability to control the system over a telephone connection (as taught by Edens et al) in order to allow for remote controllable processing and programming within the system.

Regarding claim **22**, Hamlin and Ellis teach all of that which is discussed above with regards to claim 21. Neither Hamlin nor Ellis teach that the configuration data

includes telephone data including at least one of: the telephone number assigned to the phone, call waiting options, caller ID options, answering options, forwarding options, message storage options, call blocking options, and call screening options, and where the programmable NIU uses the telephone data to communicatively couple stored external telephony services data to one of the plurality of appliances. Edens et al teach a system in which call configuration data, in the form of caller ID is delivered to the system [col. 96, lines 36-46]. It would have been obvious to one of ordinary skill in the art at the time of the invention to deliver caller ID information with the call in order to allow for easy viewing of caller identification and integration/use with pre-existing systems.

Regarding claim **29**, Hamlin and Ellis teach all of that which is discussed above with regards to claim 1. Neither Hamlin nor Ellis teaches that the processor of the NIU is adapted to function as an answering machine for incoming telephony calls. Edens et al teach a system that has an integrated recorder for use as an answering machine for incoming phone calls [col. 107, line 60 – col. 108, line 2]. It would have been obvious to one of ordinary skill in the art at the time of the invention to include answering machine functionality in order to allow for easy recording of telephone messages and integration/use with pre-existing systems and infrastructures for phone-call delivery.

Regarding claim **31**, Hamlin and Ellis teach all of that which is discussed above with regards to claim 30. Neither Hamlin nor Ellis teach configuration information being received by the NIU in the form on DTMF tones, wherein the bussing arrangement includes a two-wire analog system, and wherein the user input device is adapted to

send control signals to the NIU including DTMF tones to administratively control the NIU to configure external services data into a different format based upon a data format that can be processed by one of the plurality of telephony-based appliances to which the configured external services data is to be communicated, as indicated via the DTMF tones. Edens et al teach a system that detects a "ring" on an analog PSTN line and uses the "ring" to control the processing functionality of the system using DTMF tones [col. 96, lines 36-46]. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the ability to control the system over a telephone connection using DTMF tones (as taught by Edens et al) in order to allow for remote controllable processing and programming within the system using pre-existing DTMF functionality.

Regarding claim **37**, Hamlin and Ellis teach all of that which is discussed above with regards to claim 1. Neither Hamlin nor Ellis teaches a plurality of appliances including a microphone adapted for use in an intercom system. Edens et al teach a system that utilizes a microphone for use as a monitoring/speakerphone/intercom system [col. 97, lines 7-15]. It would have been obvious to one of ordinary skill in the art at the time of the invention to include an intercom system, in order to allow for a fully functional and easily interactable home automation system, in which telephone system integration was utilized to its fullest extent.

Regarding claim **38**, Hamlin, Ellis, and Edens et al teach all of that which is discussed above with regards to claim 37. Neither Hamlin nor Ellis teach the claimed monitoring device coupled and adapted to receive audio signals from the microphone

and, responsive to detecting an audio signal above a threshold level, send an alert signal to a user via the NIU. Edens et al disclose a monitoring device, which utilizes two audio streams and a speakerphone system to alert another user of audio information [col. 97, lines 7-15]. It would have been obvious to one of ordinary skill in the art at the time of the invention to include monitoring system, in order to allow for a fully functional and easily interactable home automation system, in which telephone system integration was utilized to its fullest extent.

Regarding claim **39**, Hamlin, Ellis, and Edens et al teach all of that which is discussed above with regards to claim 38. Neither Hamlin nor Ellis teaches that the microphone is located near an infant, and the system is used to monitor the infant. Edens et al disclose the aforementioned system and even suggest its use as a baby monitor [col. 97, lines 7-15]. It would have been obvious to one of ordinary skill in the art at the time of the invention to include monitoring system, in order to allow for a fully functional and easily interactable home automation system, in which telephone system integration was utilized to its fullest extent.

Regarding claim **40**, Hamlin, Ellis, and Edens et al teach all of that which is discussed above with regards to claim 39. Neither Hamlin nor Ellis teaches that the alert includes a page signal. Edens et al disclose the aforementioned system and even suggest its use as a baby monitor for alerting a parent of infant noises (via the speakerphone system) [col. 97, lines 7-15]. It would have been obvious to one of ordinary skill in the art at the time of the invention to include monitoring system, in order

to allow for a fully functional and easily interactable home automation system, in which telephone system integration was utilized to its fullest extent.

Regarding claim **41**, Hamlin, Ellis, and Edens et al teach all of that which is discussed above with regards to claim 38. Neither Hamlin nor Ellis teaches that the microphone is adapted to monitor noise for security monitoring. Edens et al disclose a monitoring system for monitoring noise within a household [col. 97, lines 7-15]. It would have been obvious to one of ordinary skill in the art at the time of the invention to include monitoring system, in order to allow for a fully functional and easily interactable home automation system, in which telephone system integration was utilized to its fullest extent.

Regarding claim **67**, Hamlin and Ellis teach all of that which is discussed above with regards to claim 66. Neither Hamlin nor Ellis teaches that the routing data includes the assignment of a particular telephone number to the telephony device. Edens et al disclose a system for multi-line conferencing, which can utilize multiple telephones, each with their own telephone number [col. 96, lines 36-46]. It would have been obvious to one of ordinary skill in the art at the time of the invention to include telephone phone number identification, in order to allow for a fully functional and easily interactable home automation system, in which telephone system integration was utilized to its fullest extent.

Regarding claim **75**, Hamlin and Ellis teach all of that which is discussed above with regards to claim 70. Neither Hamlin nor Ellis teaches that the external-services provider location programs the NIU with a telephony-based access package. In order

for the telephones within the Edens et al system to interact with the outside world, an access package is provided through the POTS server 186 to take care of controlling Multiple Phones. It would have been obvious to one of ordinary skill in the art at the time of the invention to include a telephone package system for use with multiple phones at one premises, in order to allow for a fully functional and easily interactable home automation system, in which telephone system integration was utilized to its fullest extent.

5. Claims **17-19**, **52**, and **60-62** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamlin in view of Ellis et al. and further in view of Cohen et al.

Regarding claim **17**, Hamlin and Ellis teach all of that which is discussed above with regards to claim 15. Neither Hamlin nor Ellis teaches that the first data form includes word processing data, and the second data form includes audio data. Cohen et al teach multiple data forms for use in a unified system (text and audio being two of those data forms) [see Abstract]. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the two data forms and conversion techniques from one to the other, in order to create a more comprehensive and consistent facility.

Regarding claim **18**, Hamlin, Ellis, and Cohen et al teach all of that which is discussed above with regards to claim 17. Neither Hamlin nor Ellis teaches that the first data form includes an email message, and the NIU is adapted to read and convert the email into an audio message. Cohen et al teach a conversion from e-mail message to

voice/audio message using the text-to-speech technology. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the two data forms (e-mail and audio) and conversion techniques from one to the other, in order to create a more comprehensive and consistent facility.

Regarding claim **19**, Hamlin and Ellis teach all of that which is discussed above with regards to claim 15. Neither Hamlin nor Ellis teaches that the first data form includes audio data, and the second data form includes word processing data. Cohen et al disclose a system that can convert among multiple forms of data (including text and voice). Figures 7 and 8 clearly indicate the transmissions from e-mail to text and from text to e-mail using appropriate engines. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the two data forms (e-mail and audio) and conversion techniques from one to the other, in order to create a more comprehensive and consistent facility.

Regarding claim **52**, Hamlin and Ellis teach all of that which is discussed above with regards to claim 46. Neither Hamlin nor Ellis teaches a voice-generating unit adapted to produce prerecorded messages. Cohen et al disclose a system that can generate voice from text using a text-to-speech engine [col. 2, line 67 – col. 3, line 3] and store them within the system for use as prerecorded messages. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the text-to-speech engine in order to create a more comprehensive and consistent facility for managing messages of all types.

Regarding claim **60**, Hamlin and Ellis teach all of that which is discussed above with regards to claim 55. Neither Hamlin nor Ellis teaches a voice-generating unit adapted to produce prerecorded messages. Cohen et al disclose a system that can generate voice from text using a text-to-speech engine [col. 2, line 67 – col. 3, line 3] and store them within the system for use as prerecorded messages. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the text-to-speech engine in order to create a more comprehensive and consistent facility for managing messages of all types.

Regarding claim **61**, Hamlin, Ellis, and Cohen et al disclose all of that which is discussed above with regards to claim 60. Neither Hamlin nor Ellis teaches that the voice-generating unit audibly produces the prerecorded messages over the user communication device. Cohen et al disclose that the message recipient has a single controllable point of contact where all messages can be scanned and/or viewed [Abstract]. This indicates that the prerecorded messages can be reproduced at the user communication device. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a voice-generating unit to audibly produce prerecorded messages, in order to create a more comprehensive and consistent facility for managing messages of all types.

Regarding claim **62**, Hamlin, Ellis, and Cohen et al disclose all of that which is discussed above with regards to claim 61, wherein the user communication device is configured for communicating a first audio signal in an audio data format, the signal being configured from a packet-based format into an audio data format by the processor

arrangement (Figs. 3, 4). Neither Hamlin nor Ellis teaches that the prerecorded messages are audibly produced at a sound level over that of the first audio signal. Cohen et al disclose a system in which the user can select which audio signal to make audible [col. 2, lines 57-68]. To make an audio signal audible, it would have to be louder than the first audio signal. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a voice-generating unit to audibly produce prerecorded messages, in order to create a more comprehensive and consistent facility for managing messages of all types.

6. Claims **69** and **71-73** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamlin in view of Ellis et al. and further in view of Lewis.

Regarding claim **69**, Hamlin and Ellis teach all of that which is discussed above with regards to claim 66. Neither Hamlin nor Ellis teaches that the routing data includes assignment data that identifies the assignment of a particular television subscription package to the TV. Lewis discloses a system that utilizes an Account/Billing System 106 in order to deliver subscription packages to the televisions in the network. Column 3, lines 50-57 and column 6, lines 25-33, make it clear that the system being implemented utilizes some sort of subscription package to manage accounts and billing. It would have been obvious to one of ordinary skill in the art at the time of the invention to include subscription package details, in order to allow for pay-per-view movies and more options for standard interactive television within the home system.

Regarding claim **71**, Hamlin and Ellis teach all of that which is discussed above with regards to claim 70. Neither Hamlin nor Ellis teaches that the external-services provider location programs the NIU with a television subscription package. Lewis discloses a system that utilizes an Account/Billing System 106 in order to deliver subscription packages to the televisions in the network. Column 3, lines 50-57 and column 6, lines 25-33, make it clear that the system being implemented utilizes some sort of subscription package to manage accounts and billing. It would have been obvious to one of ordinary skill in the art at the time of the invention to include subscription package details, in order to allow for pay-per-view movies and more options for standard interactive television within the home system.

Regarding claim **72**, Hamlin, Ellis, and Lewis teach all of that which is discussed above with regards to claim 71. Neither Hamlin nor Ellis teaches that the television subscription package includes a specified number of television sets that can use the television data. Lewis discloses a system that utilizes an Account/Billing System 106 and a Video Control System 104 in order to deliver subscription packages to multiple televisions in the network. Column 3, lines 50-57 and column 6, lines 25-33, make it clear that the system being implemented utilizes some sort of subscription package to manage accounts and billing. It would have been obvious to one of ordinary skill in the art at the time of the invention to include subscription package details, in order to allow for pay-per-view movies and more options for standard interactive television within the home system.

Regarding claim **73**, Hamlin, Ellis, and Lewis teach all of that which is discussed above with regards to claim 71. Neither Hamlin nor Ellis teaches that the television subscription package includes a pay-per-view event. Lewis discloses a system that utilizes an Account/Billing System 106 in order to deliver subscription packages to multiple televisions in the network. Column 3, lines 50-57 and column 6, lines 25-33, make it clear that the system being implemented utilizes some sort of subscription package to manage accounts and billing. It would have been obvious to one of ordinary skill in the art at the time of the invention to include subscription package details, in order to allow for pay-per-view movies and more options for standard interactive television within the home system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL VAN HANDEL whose telephone number is (571)272-5968. The examiner can normally be reached on 8:00am-5:30pm Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Chris Kelley/
Supervisory Patent Examiner, Art Unit 2424

MVH